



# Challenges for Information Access Providing, Protecting and Preserving



## Scientific Openness and National Security



# Scientific Openness and National Security



## Panelists

- **Mr. Michael Hopmeier, Unconventional Concepts, Inc.**
- **Dr. David McIntyre, ANSER Institute for Homeland Security**
- **Dr. Gigi Kwik, Center for Civilian Biodefense Strategies**
- **Mr. Peter Bacque, Richmond Times-Dispatch**
- **Mr. Chris Cupp, DTIC Network Services**



# Scientific Openness and National Security



## Presentations

- **Michael Hopmeier, Unconventional Concepts, Inc., “Balance Between Scientific Openness and National Security”**
- **Dr. David McIntyre, ANSER, “Impact to Academia and the Research Community”**
- **Dr. Gigi Kwik, Johns Hopkins, “Impact to the Scientific Community”**
- **Mr. Peter Bacque, “Impact to the News Media”**
- **Chris Cupp, DTIC Network Services, “Impact**



# Scientific Openness and National Security



## Introduction/Overview

- **Background:** During the Cold War, intelligence studies indicated that Eastern Bloc intelligence gathering efforts attempted to undermine the American leadership position in science and technology which we perceive as an essential element in our economic and physical security.
- In 1982, the DoD and the NSF sponsored an NAS study of the need for controls on scientific information.



# Scientific Openness and National Security



## Introduction/Overview

- **President Reagan issues National Security Decision Directive 189 (Sep 1985)**
  - **Purpose - To control the flow of science, technology and engineering information produced in federally-funded fundamental research at colleges, universities and laboratories.**



# Scientific Openness and National Security



## NSDD 189

- **Policy - “....to the maximum extent possible, the products of fundamental research remain unrestricted.**
- **Where national security requires control, the mechanism for control of information ..... is classification.**
- **No restrictions may be placed upon the conduct or reporting of federally-funded fundamental research that has not received national security classification, except as provided in applicable U.S. Statutes.”**



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## NSDD 189

**Definition:** “Fundamental research” means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.”



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## Important differences since 1982

- **There is an end to the Cold War.**
- **Science and technology have become more international**
- **Our national laboratories now have broader missions**
- **There is a need to continually revitalize lab staff**





# Scientific Openness and National Security



## **Elements of the Modern Scientific Endeavor**

- **Good people**
- **Open lines of communication**
- **Establish trust among all participants. Trust that is necessary to bring up embarrassing details, mistakes and the like.**
- **Close connection between experiment and theory where experimenters know some theory. Theorists appreciate and relish new experimental data.**
- **Modern science is inherently international. Ideas know no boundaries.**



# Scientific Openness and National Security



## Elements of the Modern Scientific Endeavor

- The need to share limited resources both in terms of facilities, people, and ideas.
- There must be a primary shared goal to accomplish good, important science.
- All parties must bring something to the table.... ideas, people, and equipment, and be viewed as contributing to the overall endeavor.
- No substitute for face-to-face meetings.

— Roy Schwitters, Professor of Physics, UT-Austin, Former Director of SLAC



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## Presidential Decision Directives 1 & 2

- Task the Office of Homeland Security (OHS) with coordinating government efforts to stop all forms of terrorism before they occur and responding to an attack if one should happen
- Potential Impact on Science\*
  - Increased security measures
  - Tracking students
  - International nature of science

– John Marburger, Director OSTP



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## Tracking of Foreign Students/Faculty/Scholars

- **SEVIS - Student and Exchange Visitor Information System**
  - **Operational January 2003**
  - **Who will pay? Congress appropriations and visa fees**



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## Impact of Homeland Security on Research and Education

- **Scientific communication is based on NSDD 189**
- **The Administration is considering other policies regarding “sensitive but unclassified” information**
- **Ronald Atlas, President of the AMS, warned that efforts to restrict scientific information might also “stifle research needed to develop countermeasures”**

**- AIP Bulletin of Science Policy News, FYI Number 116, 18 October 2002**



# Scientific Openness and National Security



## Impact of Homeland Security on Research and Education

- If research is of sufficient concern, it should be classified
- Independent reproducibility is at the heart of the scientific process
- International students bring vitality and talent to US universities

– AIP Bulletin of Science Policy News, FYI Number 116, 18 October 2002



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**“If you don’t start with constructive dialogue with each other, it will be a disaster. The political climate is leaning toward imposing security on the sciences.”**

**- John Hamre -**

**NAS Workshop, Scientific Openness and National Security, 9 January 2003**



# Scientific Openness and National Security



**Mr. Michael Hopmeier**  
**Chief, Innovative and**  
**Unconventional Concepts**  
**Unconventional Concepts, Inc.**

**“Balance Between Scientific  
Openness and National Security”**





# Scientific Openness and National Security



**Dr. David McIntyre**  
**Deputy Director, ANSER**  
**Institute for Homeland Security**

**“Impact to Academia and the  
Research Community”**



# Scientific Openness and National Security



**Dr. Gigi Kwik,  
Fellow, Center for Civilian  
Biodefense Strategies, JHU**

**“Impact to the Scientific  
Community”**



# Scientific Openness and National Security



**Mr. Peter Bacque**  
**Writer, Richmond Times-**  
**Dispatch**

**“Impact to the News/Media  
Community”**



# Scientific Openness and National Security



**Mr. Chris Cupp**  
**Chief, Network Services**  
**Defense Technical Information**  
**Center**

**“Impact to the Information  
Community Post 9/11 - A Case  
Study: The DTIC Experience”**



# Scientific Openness and National Security



## Precipitating Events

- **1/13/02 - NYT article, .....**
  - **Claims Government is openly providing information to the public that could assist in the production of WMD**
  - **Cites old Chem-Bio documents published by the Army that were declassified in the 1980s**
  - **Categorizes them as “Cook books” for WMD**
- **1/23/02 - OSTP & NSC meet with DOC and NTIS. NTIS disengages their Public Web Service**
- **1/24/02 - OSTP & NSC meet with OSD and DTIC and direct a review of CBRN documents**



# Scientific Openness and National Security



## Process

- **Narrow Approach**
  - **DTIC, in consultation with CBIAC and DTRA, agrees to identify documents that are currently marked “Approved for Public Release” which pertain to development or use of CBRN-related WMD.**
  - **More than 6,600 documents are identified and removed from the DTIC public web site**
  - **Although these documents are widely announced and widely available, NTIS agrees to suspend sales**



# Scientific Openness and National Security



## Process

- **2/17/02 - Publication of New York Times article "U.S. Tightening Rules on Keeping Scientific Secrets"**
- **OFFICIAL OSD/PA RESPONSE**
  - **"We did not change the basic policy for review of documentation proposed for public release. We have always been concerned about documents highlighting U.S. vulnerabilities. However, we are in the process of reviewing all web sites and documents that appear to fall in areas of particular interest to terrorists."**



# Scientific Openness and National Security



## Process

- **March '02 - OSD/C3I hosts meetings with the Military Services, DTRA, WHS and OSD/GC**
  - **DTIC agrees to provide each of the agencies with copies of citations to documents they originated and OSD/WHS agrees to coordinate all OSD documents and other documents for which DTIC could not determine a government originator or which were not originated by the Army, Navy, Air Force, OSD or DTRA.**
  - **DTIC will put those documents identified for public release back into circulation as soon as possible.**





# Scientific Openness and National Security



## Process

- **Activities receiving either a mandatory declassification review request, a FOIA request or a request for security review for public release, shall ensure that the OCA concurs in its release.**
  - **If the document cannot be publicly released, the request will be denied and a distribution limitation statement or other marking will be applied to indicate authorized dissemination. The requirements of DoD 5200.1R will be followed for marking “For Official Use Only” documents.**
  - **If a decision is made that the document can be released to the public, the request will be referred to OSD/WHIS/DFOISR for a final coordination review and release determination.**



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## Process

- **DFOISR will issue a change to DoD Directive 5230.29 to require CBRN to be referred to DFOISR before public release.**
- **Add a new distribution limitation statement to DoDD 5230.24 for documents that can be released to first responders, but are not to be publicly released.**
- **The government needs a statute to protect unclassified CBRN information that could reasonably be expected to have a harmful impact on the security of Federal operations or assets or the public health and safety of citizens of the United States.**



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## Process

- **3/19/02 - Information Security Oversight Office (ISOO) and Mr. Card, White House, issue memos, Subject: "Safeguarding Information Regarding Weapons of Mass Destruction and Other Sensitive Records Related to Homeland Security"**
  - **KEY POINTS:**
    - Classified information =< 25 Yrs: should remain classified IAW EO 12958, Sec. 1.5 and 1.6
    - Classified Information > 25 yrs: should remain classified IAW EO 12958, Sec. 3.4(b) (2)----"may exempt from automatic declassification information that would assist in the development or use of weapons of mass destruction".



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## Process

- **KEY POINTS continued:**
  - Information maintained by DTIC or NARA is deemed to have multi-agency equity
  - Previously Unclassified or Declassified Information: If never disclosed to the public and relates to the development or use of WMD, should be Classified IAW EO 12958, Part 1, Sec 1.8(d) or Sec 6.1(a).
  - Sensitive But Unclassified Disclosure should be carefully considered on a case-by-case basis, weighing the benefits that would result from the open and efficient exchange of STI



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## Process

- **KEY POINTS continued:**
  - **FOIA requests should be processed IAW the Attorney General's FOIA memorandum of October 12, 2001, by giving careful consideration to all applicable FOIA exemptions.**
  - **WMD includes: Development or use of Chemical, Biological, Radiological and Nuclear weapons.**



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## Process

- **DTIC sorts & distributes Master Accession List of citations by Military Department and distributes to the Mil Svcs for review**
- **Complete Master Accession List is also sent to NARA**
- **5/9/02 - DOE asks NTIS to suspend sales of selected documents**
- **Per request from Federal Law Enforcement, DTIC assists with the Anthrax investigations**



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## Process

- **7/17/02 - Major Patin, HQ DISA/ JRAC (Joint Risk Analysis Cell) meets with DTIC to discuss WMD search strategies so that they can crawl DoD web sites to search for sensitive and inappropriate data.**
- **10/24/02 - ASD/C3I hosts First Responder Meeting attended by DDR&E, DTIC, representatives from the Army, Navy, Air Force, DARPA, Defense FOIA Office and OSD Counter Intelligence**
  - **Purpose: to identify the need to share Defense-related information with the first responder community and to explore possibilities for sharing Unclassified Limited Distribution data between the DoD and the first responders.**



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## Process

- **If DoD is to share sensitive (UL) Defense data with first responders, the following requirements should be met:**
  - **first responders should be registered DTIC users**
  - **there must be documentation that identifies the business relationship between the DoD and the first responders. Examples may include: MOA, CRADA, Cooperative Agreement, Contract, Grant, Potential Contractor Program, etc.**
- **DoD also needs to have a central record authority for changes to document classification and distribution**





# Scientific Openness and National Security



## Status

- **Per request from DOE, NTIS suspends sales of more than 7,000 DOE reports**
- **Document review of the 6,600 DoD documents is suspended**
  - **These documents are still available to registered DTIC users**
- **DTIC drafts a strawman for possible changes to DoDD5230.24 for possible consideration of sharing Defense information with First Responders and State and Local Government officials**
- **DTIC Deputy Administrator participates on a DSB study to identify the missions and roles of the DoD regarding information sharing between the federal government, state and local governments and first responders**



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## Implications

- **Per instructions from the WH and ISOO memos, DTIC continues to scrutinize new accessions that are related to the development or use of CBRN WMD, as well as, information related to the stockpiling of nuclear material, and are marked “Approved for Public Release”**



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## Taxonomy for Evaluating Risks of Open Access to STI

- Ranges between “serious and “more or less modest”
- Distinction between “know how” and fundamental information”
  - Serious risk - how to build a nuclear bomb or dangerous pathogens
  - Modest risk - potentially dangerous chemicals
  - Minor or non-existent risk - basic physics

– Charles Vest, President, MIT



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## Questions/Comments